

# Arizona's Instrument to Measure Standards (AIMS)

## 2004 - 2005 Student Guide Grade 8



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# Questions About AIMS

## **What is AIMS?**

Arizona's Instrument to Measure Standards (AIMS) is an assessment program that measures your achievement of the Arizona Academic Standards adopted by the state Board of Education in three subject areas: Reading, Writing, and Mathematics.

## **Who has to take AIMS?**

All students in grades 3 – 8 and high school are required to participate in AIMS testing.

## **What will be tested on AIMS?**

Test items were written to measure specifically the Standards, Concepts and Performance Objectives described in the Arizona Academic Standards (Articulated by Grade Level for Reading and Mathematics), which were approved by the state Board of Education in March 2003. There will be an Extended Writing Prompt that students will use to actively engage in the writing process. Your writing will be scored using the Six Trait™ Model Rubric. There will be no multiple-choice questions on the writing test.

## **How can I use this guide to prepare for AIMS?**

This guide is divided into the three subject areas assessed on AIMS. It gives a short explanation of each testing format, hints for test taking, sample test questions, and a scoring guide for written responses. It will NOT teach you what you should know and be able to do to score well on the tests, but it will help you become familiar with the tests.

**Arizona State Guidelines for AIMS can be found on the ADE website:**

<http://www.ade.az.gov/standards/>

### **How can I prepare for AIMS?**

- Attend school regularly.
- Become familiar with the Arizona Academic Standards documents so that you understand exactly what you are expected to know and be able to do.
- Ask questions.
- Take charge of your own learning! Monitor your progress. Self-assess what you know, what you can do well, and where you need to improve.
- Actively participate in class.
- Have a scheduled time and place to study and do homework.

## **Types of Items**

### **MULTIPLE-CHOICE**

Multiple-choice items will require you to select the BEST response from four possible answer choices and indicate your choice by bubbling in the corresponding letter on an answer sheet. Although some responses will require a recall of facts, or the computation of a correct answer, many of the items will require higher-level thinking and processing. Each multiple-choice item is scored correct (1 point), or incorrect (0 points), and contributes one point to the overall score.

### **EXTENDED WRITING RESPONSE**

The extended response item will ask you to respond to a prompt, which might include writing a letter, an essay, or a narrative. These responses will require a well-developed and well-organized presentation of ideas that follow a particular format suitable to the purpose and audience. You will be expected to develop your written response by following the steps in the writing process: prewriting, drafting, revising, editing, and producing a final copy. You will be provided with a revision checklist to guide your work. Your finished copy, not your prewriting or rough draft, will be scored using a six-point rubric that scores each trait or characteristic of effective writing. The rubric for this type of item is provided in the Appendices.

# READING

Reading is fundamental to all learning and supports us as lifelong learners. It can open our minds to people, places, and ideas beyond our own experiences. It gives us the knowledge we need to make informed choices as responsible citizens in a democratic society. One needs only to browse the Internet to realize how much information is available to us at our fingertips. Understanding what we read, using the wealth of information available to us, and thinking critically about what we read, are crucial skills to function successfully in today's world.

## ABOUT THE TEST

On AIMS, you will be given several passages to read, both fiction and nonfiction. You may also be given informational text to read; for example, labels and pages from manuals. The questions will measure your ability to understand, interpret, and analyze what you have read. There are approximately 60 multiple-choice Reading items and approximately 20 Language Arts items on the Reading test, which should be completed in 1-2 hours. One sample passage is provided in this guide followed by a set of questions. Reading this passage and answering the questions may help you prepare for the test. An answer key for the Reading questions is provided in the appendices.

## HINTS FOR TAKING AIMS-READING

- You will be asked to read different types of fiction and nonfiction, so adjust your reading to your purpose. Read each passage and the accompanying questions carefully.
- In the multiple-choice questions, choose the **best** response to the question.
- Think about each question before you respond.
- Manage your time so that you won't feel rushed answering questions that require more thought. Again, this is not a timed test, but you do want to use your time well.

## Bisbee

“Hurry up, or we’ll miss it,” Larry called as he ran around the corner. He had always been faster even though I was stronger. That’s why we always liked to play sports together, we were a great team.

It was the summer of 1950 when I turned fourteen and our lives were all about to change. No matter how nervous we were about the move, we looked forward to seeing how people moved whole houses.

“You missed it,” my sister Juana told us as we looked up helplessly as men loaded my family’s three-bedroom house onto a huge flatbed truck. Suspended in midair was the home I had been living in for almost ten years. I caught my breath as the house and heavy equipment groaned and creaked and popped. Some of the houses had fallen apart when the company tried to move them. Soon there would be nothing left of our neighborhood but bare foundations and rubble.

I didn’t want to move out of this mining community. Since we had moved to Bisbee, Arizona, the Lavender Pit Mine had produced over a hundred million pounds of copper. The lead and zinc—extracted along with the copper—had also kept the town going. Some people thought that the Lavender Pit Mine had been named for the lavender streaks in the copper hills, but it was actually named for the mine’s general manager, Harrison Lavender. Mr. Lavender and his engineers had made some very accurate predictions long before my family came to town. The mine had grown to more than a mile long, three-quarters of a mile wide, and almost a thousand feet deep. The mining operations had eaten up the copper-colored hills where Larry and I used to ride our bikes. Electric shovels had gnawed away at the ground until the vast pit mine had given up all she had and they were closing her down. Now, two hundred and fifty homes were being relocated from Lowell, Upper Lowell, and Johnson Addition.

The company had built long dirt roads as wide as interstates to roll away the houses on the flatbed trucks. When the houses arrived in Saginaw, they would be set on their new foundations and hooked up to the gas and water supply lines. The miners would help each other make repairs, and the mining company was paying for everything, but it wasn’t easy pulling up roots.

Larry folded his scrawny arms across his chest and interrupted my unhappy thoughts. “Is your father going to let you try out for football this year, David?”

Scowling, I kicked a rock into the road. “Nah. I’ll be busy fixing windows, hanging sheetrock, and painting some of these houses.” I noticed a little bit of pride creeping into my voice. Like all of the miners, my dad worked long and hard hours, and I would be needed to make the repairs around the neighborhood. There would be much work to do, and every family member’s help would be valuable. Besides that, I figured that before football season was over, I would earn enough money to have a pretty good savings account started.

Shading his eyes from the late afternoon sun, Larry looked down the road. “I was thinking the same thing,” he said. “Maybe you and I can make some money working together this year. Then we can drive ourselves to football practice year after next.” We laughed and spent the rest of the afternoon talking about cars. We had been talking about our dream cars since sixth grade.

It was nearly dark when the men settled the house onto the flatbed. The truck would roll out first thing in the morning. With a little luck the house would make it in one piece to the new neighborhood. Just then, my dad drove up and parked under the tree he had planted ten years ago. “Looks like they’re about done,” he called out to me. He looked tired after another hot day, but he stepped out of his truck, walked up, and put a hand on my shoulder.

“It’s still in pretty good shape, Dad,” I said. “But we’ll have plenty of work to do on it once it’s back on the ground.”

We stood quietly for a while and watched the men pack up their tools for the day. Our gazes turned to

the space where our house once stood, like a graveyard with small pieces of our past strewn about like memories.

Dad turned to look at me and said, “I’m sorry that you won’t be able to try out for football like you wanted, David.”

I shrugged and smiled back. “There’s always next year.”

1. What would most likely cause “pride to creep into” David’s voice?

- A He wanted to move to Saginaw.
- B He looked forward to working long hours.
- C He felt good to be able to help others.
- D He did well in football last year.

2. Which character is heard from a first person point of view?

- A Dad
- B Juana
- C Larry
- D David

3. How did the main character of this passage try to resolve a Person vs. Nature conflict?

- A by moving to a new location
- B by waiting a year to play football
- C by making repairs around the neighborhood
- D by closing down the mine

4. Based on the passage, what does David **most likely** plan to do with the money he earns?

- A buy new tools
- B go to a football game
- C purchase a car
- D repair the house



5. Read this sentence from the passage.

Electric shovels gnawed away at the ground until the vast pit had given up all she had and they were closing her down.

What did the author mean by this sentence?

- A The mine was named after a woman.
- B The mine no longer had enough copper.
- C The mine kept the town going.
- D The mine was more than a mile long.

6. Read this sentence from the passage.

Our gazes turned to the space where our house once stood, like a graveyard with small pieces of our past strewn about like memories.

What did the author mean by this sentence?

- A There was little left to remind them of Bisbee.
- B There was a huge hole left in the ground.
- C The house had broken into many pieces.
- D The early miners were buried nearby.

7. Which trait does **not** describe David?

- A hopeful
- B argumentative
- C friendly
- D upset

8. Read the sentences about the passage.

1. David turned fourteen.
2. The company built wide roads.
3. The history of the Lavender mine was described.
4. The family moved to Bisbee.

Which of the following shows the sentences numbered in chronological order?

- A**     3 – 4 – 1 – 2
- B**     4 – 1 – 2 – 3
- C**     3 – 1 – 2 – 4
- D**     4 – 3 – 1 – 2

# Writing

Writing is a critical skill for effective communication. Whether you are writing an e-mail message, a personal letter, an ad for your business, or a formal report for school or work, being able to express your ideas clearly to your audience is important. Becoming a good writer is not easy. It takes effort and development of a variety of skills: clear ideas, organization, a voice that holds the interest of your audience, and a consistent control of language, including word choice, sentence structure, and conventions (spelling, grammar, punctuation and capitalization). With new technology, it is possible to electronically communicate in writing with people all over the world in a matter of minutes. Writing will continue to be a communication skill that is required in most professions and workplace environments. Acquiring effective written communication skills will enhance both your personal and professional opportunities.

## ABOUT THE TEST

You will be expected to write one extended writing piece on a specific topic. This writing test will be completed in one session, so all steps in the writing process, including revising and editing, and a final copy, will be done in that one session. The test should take approximately 2-3 hours to complete. There is an example of a writing prompt and scored student responses to this prompt that follow.

### Sample Prompt

People are always looking for ways to improve schools, and some of the best ideas come from students. Think of ONE change you could propose to make your school better. Write an essay to CONVINCE other students and teachers in your school to agree with you.

## Hints for taking AIMS – Writing

### Prior to the test

- Read the three sample student responses to the prompt on the following pages. Note strengths and weaknesses in the paper as you read. Does the writer accomplish the task? Is the writer's message clear? Are the ideas supported with convincing evidence and support? Are the ideas organized so that you can logically follow them? Is the voice appropriate? Did the writer carefully choose words that are clear and convincing? Do the sentences have a natural flow? Is the paper carefully edited?
- Discuss with other students and your teacher why one paper is stronger or more convincing than another.

- Practice writing a persuasive response to this sample prompt. Score your own paper using the rubric to determine what your strengths are, and then work on areas you need to improve to be a more effective writer.

### **During the test**

- Listen to directions and read the prompt carefully and be sure you understand the purpose before beginning to write.
- Take time to organize your thoughts before you begin to write. For the extended writing prompt, you may want to create a graphic organizer (outline, web, chart, map, cluster, etc.) to plan and organize your ideas.
- Take advantage of the opportunity to revise your work using the checklist provided. Keep in mind the six traits (characteristics) of effective writing.
- Edit your writing carefully. Your audience (the reader) needs to be able to understand the ideas you are expressing without being hindered by spelling, punctuation, capitalization, and grammar mistakes that interfere with the message. **You must be sure your handwriting is legible. Printing your work is acceptable; however, be sure to distinguish between upper- and lower-case letters. Do NOT print in all capital letters.**

### **Keep in mind...**

- You will be given two pages in the test booklet to write your final copy. It is important that you take advantage of the two pages you are given to develop your ideas fully. This is your opportunity to demonstrate how well you can write.
- Your final copy needs to be handwritten (not done on a computer).
- You may use a dictionary or thesaurus as a reference during the Extended Writing Response portion of the test.
- Be conscious of the traits, or characteristics, of effective writing (idea development, organization, voice, word choice, sentence fluency, and conventions) no matter what kind of writing you are asked to do. The same scoring guide, or rubric, will be used for all the types of writing you may be asked to compose: narrative, persuasive, expository, or formal communication.

**To examine additional papers that will give you an even better idea of what papers look like with a range of higher and lower trait scores, visit the Oregon Department of Education website @:**

**<http://open.k12.or.us/standards/cimcri/cimcriw.html>**. We extend our thanks to them for allowing us to reproduce these sample papers.

### Sample Prompt

Sample Writing Prompt: Your local newspaper is running a series of articles to highlight the positive things teenagers do. The editors have asked their readers to submit stories about teens helping others that they intend to publish in this series.

WRITE A STORY to submit to the newspaper about a time when you or someone you know did something for someone else that **MADE YOU FEEL PROUD**. **TELL WHAT HAPPENED** and **HOW YOU FELT** about the experience. Use your own paper and ask your teacher to help you score your final results.

This is the writer's checklist you will see on the 8<sup>th</sup> Grade AIMS writing test. Practice using it when writing to revise your rough draft before writing your final copy. If you take the time to use it carefully, it will help you write a better paper.

#### WRITER'S CHECKLIST

- My paper has a specific audience and a specific purpose.
- My paper contains a strong controlling idea.
- My paper stays on topic.
- My paper includes specific and relevant details, reasons and examples.
- My paper has an effective beginning, middle, and end.
- My paper progresses in a logical order, and my ideas flow smoothly.
- My paper contains words that make it interesting.
- My paper contains sentences that are clear and varied in structure.

**NOTE:** In previous editions of the *Student Guide to AIMS*, sample student papers were electronically scanned into the *Guide*. However, the resulting document was difficult to read and slow to download. These scans were also of uneven quality and some portions of the student essays were not legible. For these reasons, the sample student papers were typed in a font to suggest a student's written response in this edition of the *Guide*.

## WRITING SAMPLE 1

### I Feel Proud When I Help Someone

Write the final copy of your paper here.

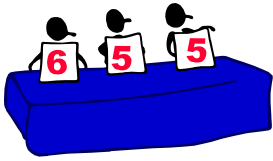
#### I Feel Proud When I Help Someone

Have you ever helped someone in need? If you have you'll know it makes you feel really good inside. It puts a different light on helping people. I know how this is because I helped a person in need one time, and not only did it make me feel good it gave me a new friend.

There was this old lady that lived across the street from me. I thought she must be very lonely because her husband had passed away and she was living all alone. When I came home from school I would see her on hands and knees digging weeds out of her garden. Then she would load up a heavy wheelbarrow and haul the weeds into a pile. I used to think to myself, 'I wonder if she could use some help?' But I would always dismiss the thought and go play.

One day when I got off the school bus I saw her walking down her steep driveway to get the newspaper. Without even realizing it I picked up the paper and ran over to give it to her. When I handed her the paper I felt kinda funny, until I saw how grateful she was. She was so thankful that she said if I did this every day that she would give me something in return. So as the days went on I continued to get her paper and occasionally help her in her garden. I did get a treat. She gave me fresh baked chocolate chip cookies.

The day came when we were spending a lot of time together. We weeded the garden, burned brush, and washed windows. This is how my neighbor, Mrs Higbee and I became close friends. Even though Mrs. Higbee has moved to a rest home now it still gives me a warm feeling to think back and realize that just by going a little bit out of my way to help my neighbor, that it brought us to be very close friends.



## SCORE SHEET FOR WRITING SAMPLE 1

Title: I Feel Proud when I Help Someone

(This is an ACCEPTABLE response.)

Ideas and Content					
6	5	4	3	2	1

Organization					
6	5	4	3	2	1

Voice					
6	5	4	3	2	1

Word Choice					
6	5	4	3	2	1

Sentence Fluency					
6	5	4	3	2	1

Conventions					
6	5	4	3	2	1

NOTE 1: The underlined passages are taken from the *Official Scoring Guide for AIMS Writing* (Six Trait Rubric).

NOTE 2: Although all writing samples in this *Guide* are on one page, two-page originals were "shrunk-to-fit" on one page.

**Ideas and Content:** This paper scored a **5** in ideas. The writing is clear, focused, and interesting. Main ideas stand out and are developed by supporting details suitable to audience and purpose; the writing makes connections and shares insights. *I thought she must be very lonely because her husband passed away and she was living all alone. When I came home from school I would see her on her hands and knees digging weeds out of her garden. Then she would load up a heavy wheelbarrow and haul the weeds into a pile. I used to think to myself, "I wonder if she could use some help?" But I would always dismiss the thought.*

**Organization:** This paper scores a **5** in organization. The paper has a strong inviting beginning that focuses the reader on the topic. *Have you ever helped someone in need? If you have, you'll know it makes you feel really good inside.* Smooth transitions that work among all elements (sentences, paragraphs, and ideas) and sequencing that is easy to follow and works with the ideas which develop over time. Details fit where placed. The ending brings the piece to a strong conclusion, reinforcing and reflecting on the main idea of the piece. *This is how my neighbor, Mrs. Higbee and I became close friends. Even though she has moved to a rest home now it still gives me a warm feeling to think back and realize that by just going a little bit out of my way to help my neighbor, that it brought us to be very close friends.*

**Voice:** This paper scores a **5** in voice. The writer seems deeply committed to the topic and the writing is expressive, engaging, and sincere. *When I handed her the paper, I felt kinda funny, until I saw how grateful she was. The reader feels a strong sense of the writer behind the words. There is a sense of interaction with the reader.* *Have you ever helped someone in need? If you have then you'll know it makes you feel really good inside...I know this because I helped a person in need, and not only did it make me feel good, it gave me a new friend.* The voice does seem to fade at opportune times (moving to the rest home) which keeps it from scoring a 6.

**Word Choice:** This paper scored a **5** in word choice. Words convey the meaning in an interesting, precise, and natural way appropriate to audience and purpose; words evoke clear images. *I wold see her on her hands and knees digging weeds out of her garden. Then she would load up a heavy wheelbarrow and haul the weeds into a pile...She gave me fresh baked chocolate chip cookies.*

**Sentence Fluency:** This paper scored a **6** in fluency. The writing has an effective flow and rhythm. Consistently strong and varied sentence structure makes reading aloud easy and enjoyable. The sentence structure enhances meaning by drawing attention to key ideas or reinforcing relationships among ideas. *I know how this is because I helped a person in need one time, and not only did it make me feel good, it gave me a new friend.*

**Conventions:** This paper scored a **5** in conventions. The writer demonstrates strong control of a variety of standard conventions: spelling, end-of-sentence punctuation, quotations, questions, and parallel structure. Little, if any need for editing.

## WRITING SAMPLE 2

### Children

Write the final copy of your paper here.

#### Children

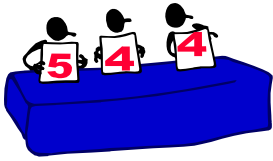
"Come on, hurry up Stacey," I yelled. Stacey yelled back that she was coming. It was Christmas time 1988, Stacey and I were loading gifts into the cars. We were almost ready to leave for Woodburn and deliver the gifts. At last we had arrived at the church where the children were. My mother asked if Stacey and I would come help with the presents. We got the bags of presents and took them into the church all the little children were waiting for us.

First we had all the children sit down so we could give them their gifts. As they opened the gifts the childrens eyes lite up. I had never seen a child so thankful for a coat or boots, then I started to realize how lucky I was for all the clothes I had. I was holding a little three year old girl, who had received a doll that made her really happy. We had our pictures taken and put in the newspaper.

After every child had opened thier gifts, it was time for us to go home. This was an experience I will never forget.

Seeing the childrens faces lite up is some thing I can't explain. I loved doing that and I would do it again for sure.





## SCORE SHEET FOR WRITING SAMPLE 2

Title: Children

(This is an ACCEPTABLE response.)

Ideas and Content					
6	5	4	3	2	1

Organization					
6	5	4	3	2	1

Voice					
6	5	4	3	2	1

Word Choice					
6	5	4	3	2	1

Sentence Fluency					
6	5	4	3	2	1

Conventions					
6	5	4	3	2	1

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**Ideas and Content:** This paper scores **4** in ideas. The writing is clear and focused. The reader can easily understand the main ideas, and it is clear why this experience made the writer feel good. *First we had all the children sit down so that we could give them their gifts. As they opened the gifts, the childrens eyes lite up.* Supporting details are relevant, but may be overly general or limited in places. It takes the writer some time (two paragraphs) to really get to the point of this piece, the interaction with the children. More time on this, and less on the build-up of details to get there, would have made the focus of this piece stronger. Some connections and insights may be present. *I started to realize how lucky I was for all the clothes I had.*

**Organization:** This paper scores a low **5** in organization. The organization enhances the central idea...an inviting beginning draws the reader in. *"Come on, hurry up, Stacey." I yelled...we were almost ready to deliver the gifts.* Details fit where placed. In the conclusion, the writer reflects on this experience, which provides a satisfying sense of resolution or closure. Transitions could be stronger.

**Voice:** This paper scores a **4** in voice. The writer seems committed to the topic, and there is a feeling of writing to be read. The voice is sincere and strong in places, particularly in the last paragraph. *This was an experience I will never forget. Seeing the childrens faces lite up is something I can't explain. I loved doing that and I would do it again for sure.* However, there are missed opportunities in other places.

**Word Choice:** This paper scores a **4** in word choice. Words effectively convey the intended message. Words that work but do not particularly energize the writing. Rare experiments with language; however, the writing may have some fine moments and generally avoids cliches. *I was holding a three year old girl who had received a doll that made her really happy...After every child had opened their gifts, it was time for us to go home.*

**Sentence Fluency:** This paper scores a **4** in fluency. The writing flows, sentence patterns are somewhat varied, strong control over simple sentences, but variable control over more complex sentences. *It was christmas time 1998, Stacy and I were loading gifts in the cars...We got the bags of presents and took them into the church all the little children were waiting for us.*

**Conventions:** This paper scores a **4** in conventions. The writing demonstrates control of standard writing conventions. Minor errors do not impede readability. Moderate need for editing. *Thier for their, lite for light, childrens faces (no apostrophe), christmas (not capitalized)*

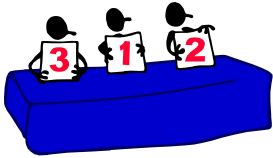
### WRITING SAMPLE 3

#### Thanksgiving

Write the final copy of your paper here.

Thanksgiving

At thanksgiving we had our familie came over to eat\_\_ turkey and the turkey was good and every body had a\_\_ good time. At 6:00 every one started to leave by\_\_ 6:30 every body was gone. We get a phone call from\_\_ Christi, Lori's mom and she got my older sister to\_\_ babysit Lori and Bobby cuz there next door neybor\_\_ Elaine had a strock. Brad and Christi wanted to\_\_ go see her Barb wanted Lori and Bobby to cover our\_\_ house and so they did and the next morning we all\_\_ all gone to town and stoped at B.R. auto parts where\_\_ Lori's Mom works to see when they had to come home\_\_ they didn't need to go home so we go to town and had\_\_ fun and about 5 we took them home The next day was\_\_ school so when we got home we call Lori and she tells us Elain was'nt doing good so they fly her to Phoenix to do surgery on her. A couple days later she was\_\_ feeling better and a couple more days she goes back\_\_ home and goes to bed her daughter flew from Ohio to\_\_ see her and a week later we found out that she was\_\_ going to move to Ohio and wen she moved we bot her a card and some cinamin roles We told her we will miss you and then we never saw her agian and we all whent\_\_ home and we all felt good about our self's.



## SCORE SHEET FOR WRITING SAMPLE 3

Title: Thanksgiving

(This is an UNACCEPTABLE response.)

Ideas and Content					
6	5	4	3	2	1

Organization					
6	5	4	3	2	1

Voice					
6	5	4	3	2	1

Word Choice					
6	5	4	3	2	1

Sentence Fluency					
6	5	4	3	2	1

Conventions					
6	5	4	3	2	1

NOTE 1: The underlined passages are taken from the *Official Scoring Guide for AIMS Writing* (Six Trait Rubric).

NOTE 2: Although all writing samples in this *Guide* are on one page, two-page originals were "shrunk-to-fit" on one page.

**Ideas and Content:** This paper scores a 2 in ideas. The main ideas and purpose are somewhat unclear and require extensive inference by the reader. It is difficult to know where this piece is going because of the irrelevant details that clutter the text. The paper lacks a clear focus and instead, relates a series of events in sequence. Details are often unexplained or confusing to the reader. *We got a phone call, it was Christie, Lori's mom...Barb wanted Lori and Bobby to come to our house instead, so they did.*

**Organization:** This paper scores a 3 in organization. Attempts at sequencing, but the relationship among ideas may be unclear. Although the piece has a beginning and an ending, they are underdeveloped. The introduction does not help the reader identify where the story is going or what the purpose of the writing is; there is no hint of a main idea. The placement of details is not always effective. *The next morning we all went to town...Lori and Bobby didn't need to go home so we go to town to have some fun and about 5 we took them home.*

**Voice:** This paper scores a 2 in voice. Little sense of involvement or commitment; the writing is largely flat, lifeless, stiff, or mechanical. The writing tells what happens in sequence. There is a brief sense of the writer (*We told her we would miss you and then we never saw her again and we all went home and we all felt good about our selves*), but not enough to move it to the 3 level, where voice is present but inconsistent.

**Word Choice.** This paper scores a 2 in word choice. Words are colorless, flat or imprecise, Images are fuzzy or absent altogether. *The turkey was great, everyone was having a good time....she was'nt doing good so they fly her to Phoenix to do surgery on her.*

**Sentence Fluency:** This paper scores a 2 in fluency. The writing tends to be rambling; there are a significant number of awkward, rambling constructions. Overuse of "and", "so" and run-on sentences. *Brad and Christi wanted to go see her and so they did and the next morning we all gone to town and stoped at BR auto parts where Lori's Mom works to see when they had to come home they didn't need to go home so we go to town and had fun and about 5 we took them home ....*

**Conventions.** This paper scored a 2 in conventions. Frequent errors in grammar, usage, and spelling interfere with meaning. No paragraph indentations. Frequent errors in capitalization and misuse or missing internal and end punctuation. Little control over basic conventions. Substantial need for editing.

# MATHEMATICS

Mathematics is used as a means to communicate about quantities, logical relationships, and unknowns. Such a simplistic statement may make students who are not planning to go to college ask why mathematics is necessary for them.

While the ability to do computation is important, it is the skills of problem finding and problem solving, formalizing, abstract thinking, symbolic representation and interpretation, formulation of logical arguments, and objective reasoning that allow us to function effectively and understand our world.

Mathematics is the one area of coursework in the school curriculum where students are taught these skills, and where answers cannot be obtained just by common sense and guessing. Even without an ever-increasing reliance on technology, mathematical skills meet needs for practical everyday life, intelligent citizenship, and future employment. A study by Arizona State University indicated that students who opt out of advanced levels of mathematics and science may now eliminate up to 75% of career opportunities from which to choose<sup>†</sup>. Algebra has been called the academic passport for passage into virtually every facet of the job market. Employers want their employees to be able to set up problems, estimate solutions, identify how accurate solutions need to be, work with other people to reach goals, know the many different types of mathematics that exist, and determine which one is needed in a particular situation. It is clear that the mathematical literacy of the twentieth century will NOT be sufficient for the twenty-first century.

<sup>†</sup> ASU Research, Fall, 1998, p. 41

## ABOUT THE TEST

The mathematics test contains approximately 100 multiple-choice questions. Calculators are not allowed; however, the calculations required can be readily handled with pencil and paper. The questions will emphasize conceptual understanding, process, and problem solving skills rather than just computation skills.

## Hints for taking AIMS – Mathematics

- Remember, this is not a timed test. Take your time and do your best work.
- Since calculators are not allowed on this test, double-check your work!
- Check to see if your answer is reasonable.

# **Sample Questions for Mathematics**

## **What To Expect From This Section**

This AIMS Student Guide for Mathematics provides examples of the format and types of questions that will appear on AIMS Mathematics. An attempt has been made to provide a sampling of the types of questions that might be asked; however, not every concept in each standard has a corresponding sample question in this Guide. An answer key for all Mathematics sample questions is provided in the appendices. Additionally, you will find an AIMS Reference Sheet in the appendices. The reference sheet in the actual AIMS Mathematics test will be revised to reflect the formulas and other information that will be included on the test.

### **Standard 1: Number Sense and Operations**

**General concepts you should know:**

- Real number system and its various subsystems (natural, whole, integers, rationals, and irrationals)
- Operations with positive and negative numbers
- Scientific notation
- Estimation strategies

1. Which of the sets below includes only rational numbers?

- A.  $\{-3.454545\dots, -\sqrt{3}, 5, 18.3\}$
- B.  $\{-9.2, \pi, \sqrt{24}, 19.173894\}$
- C.  $\{-7, \pi, \sqrt{16}, \sqrt{64}\}$
- D.  $\{-\sqrt{36}, 4.25, 9.323232\dots, 26\}$

2. Trey bought a pair of shoes that cost \$84. He was charged 7.4% for sales tax. How much did Trey pay for the shoes including the sales tax?

- A. \$6.22
- B. \$62.16
- C. \$90.22
- D. \$146.16

3. Maya estimated the product below before finding its value using a calculator.

$$(47.8)(12.85)$$

Which estimate is the closest to the actual product?

- A. 650
- B. 624
- C. 564
- D. 500

### **Standard 2: Data Analysis, Probability and Discrete Math**

**General concepts you should know:**

- Graphs (histograms, line graphs, circle graphs, box-and-whisker plots, frequency charts, stem-and-leaf plots, and scatter plots)
- Measures of central tendency, variability and correlation (mean, median, mode, quartiles, and range)
- Pattern prediction
- Probability
- Probable outcomes of events
- Systematic listing and counting; outcomes sets
- Use of combinations vs. permutations

4. Clarence will conduct a probability experiment in which he will randomly select colored marbles, of identical size and shape, from a bag. Clarence will use the procedures below to conduct the experiment:

- Randomly select a marble from the bag.
- Record the color of the marble in a data table.
- Replace the marble into the bag.
- Repeat the procedure 4 times.

The probability of selecting a red marble is  $\frac{1}{3}$ .

What is the probability that the first 4 marbles Clarence selects will be red?

- A.  $\frac{4}{3}$
- B.  $\frac{1}{3}$
- C.  $\frac{1}{12}$
- D.  $\frac{1}{81}$

5. A local movie theater is planning a “Super Hero Saturday” event. The theater will show the 6 movies listed below.

“Mr. Super”  
“Beastman”  
“Y-Guys”  
“Arachno-Boy”  
“The Enigma”  
“Lady Luck”

If each movie is only shown once, in how many different ways can the movies be shown?

- A. 720
- B. 441
- C. 25
- D. 6

6. Molly discovered an error with the data in the table below. She found that during the month of March 488 new homes were sold.

**January – June  
New Home to Re-Sale Home Comparison**

Month	New	Re-Sale
January	305	340
February	371	324
March	288	371
April	510	413
May	521	442
June	544	490

Which of the following accurately describes the trend in the data once the error was corrected?

- A. The number of Re-Sale homes sold increased each month.
- B. The number of New homes sold increased each month.
- C. The number of New homes sold was always more than the number of Re-Sale homes sold.
- D. The number of Re-Sale homes sold was more than the number of New homes sold in January and March.

7. Aftyn and Nathan are planning to conduct a survey to find out which cafeteria food is most popular with 8<sup>th</sup> graders.

Which of the following is the least appropriate question for their survey?

- A. How often do you go out to eat with your family?
- B. How often do you eat in the school cafeteria?
- C. How often do you eat the food from the fast food line?
- D. How often do you eat salad from the salad bar?

### **Standard 3: Patterns, Algebra and Functions**

**General concepts you should know:**

- Identify and extend patterns
- Graphing, evaluating, simplifying, and solving linear equations and inequalities
- Distinctions between linear and nonlinear equations and their graphs
- The slope of a line and what it represents

8. Tom formed a pattern that used the steps shown below:

- Start with -5 as the first term.
- Each new term is 4 more than the immediately previous term.

What are the first 4 terms of Tom's sequence?

- A. -5, -9, -13, -17
- B. -5, -1, 3, 7
- C. -5, -1, 2, 6
- D. -5, 0, 2, 6

9. Which T-chart could be generated from the rule  $y = 3x - 2$ ?

A.

$x$	$y$
-2	-4
-1	-1
0	2
1	5

C.

$x$	$y$
-3	-11
-2	-8
-1	-5
0	-2

B.

$x$	$y$
0	-2
1	0
2	2
3	4

D.

$x$	$y$
-1	-5
0	-2
1	0
2	2

10. What is the value of the following expression when  $x = 3$ ,  $y = 1$ , and  $z = 5$ ?

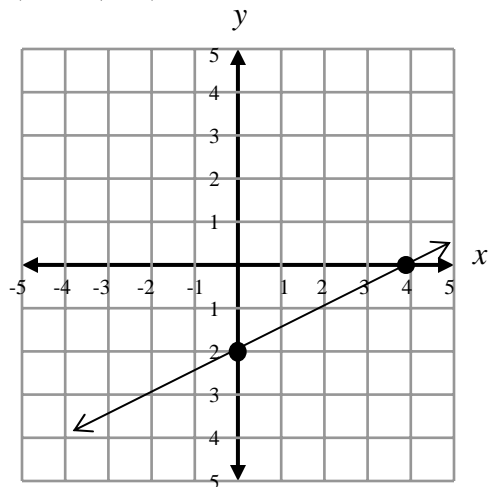
$$(3z - 2x)^2 + 2y$$

- A. 80
- B. 83
- C. 221
- D. 1521

11. Which of the following has the same solution as  $x + 5 = 11$ ?

- A.  $3x - 5 = 12$
- B.  $\frac{1}{2}x + 2 = 26$
- C.  $4x - 7 = 9$
- D.  $2x + 3 = 15$

12. What is the slope of the line contains the points (0, -2) and (4, 0)?



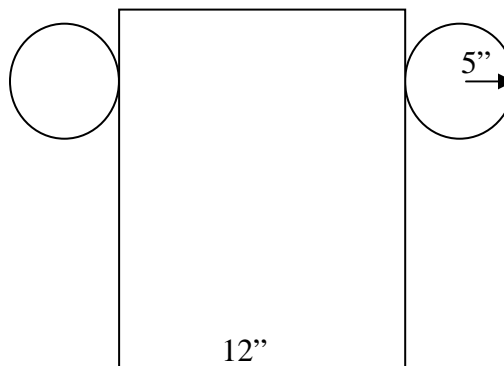
- A.  $\frac{1}{2}$   
 B.  $-\frac{1}{2}$   
 C. 2  
 D. -2

#### **Standard 4: Geometry and Measurement**

**General concepts you should know:**

- Pythagorean Theorem
- Geometric relationships (parallelism, perpendicularity, congruency)
- Angle characteristics (complementary, supplementary, and congruent)
- Circle characteristics (arcs, inscribed angles, tangents, and secants)
- Identification of prisms, pyramids, cones, cylinders, and spheres
- Coordinate plane characteristics (coordinates, distance and midpoint)
- Transformations (reflections, rotations, dilations, translations; symmetry)
- Appropriate units of measure, applications of techniques and formulas
- Perimeter, area, volume; measuring line segments, lines, angles, 2-D and 3-D figures

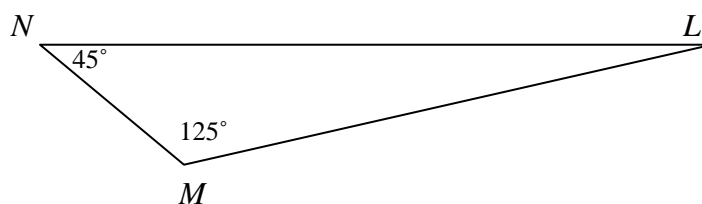
13. The net of a cylinder is shown below:



Which of the following represents a method that can be used to find the surface area of the cylinder?

- A.  $\pi \cdot 5 \cdot 5 \cdot 12$   
 B.  $2(\pi \cdot 10) + 12(\pi \cdot 5 \cdot 5)$   
 C.  $2(\pi \cdot 5 \cdot 5) + 12(\pi \cdot 10)$   
 D.  $2(\pi \cdot 5) + 12(\pi \cdot 10)$

14. In  $\triangle LMN$ , what is the measure of  $\angle L$ ?

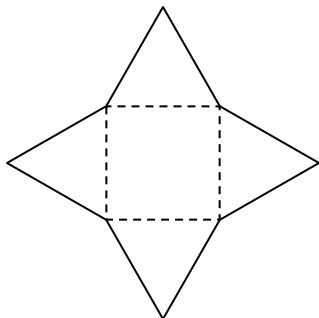


- A.  $10^\circ$   
 B.  $20^\circ$   
 C.  $35^\circ$   
 D.  $55^\circ$

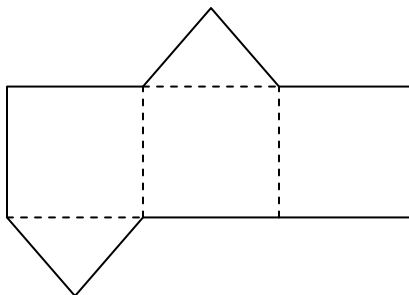


15. Which of the following nets could be used to make a triangular pyramid?

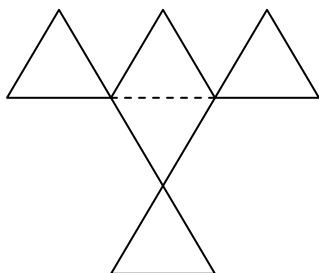
A.



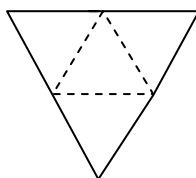
C.



B.

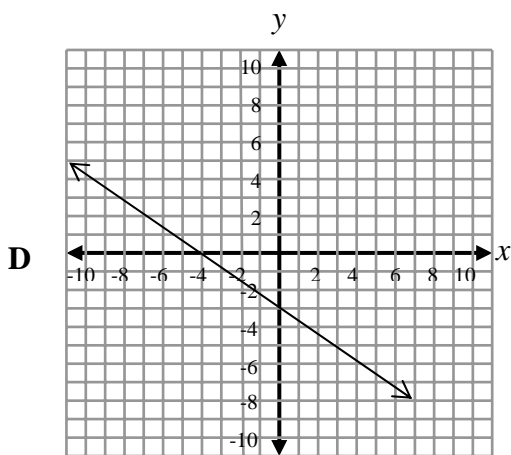
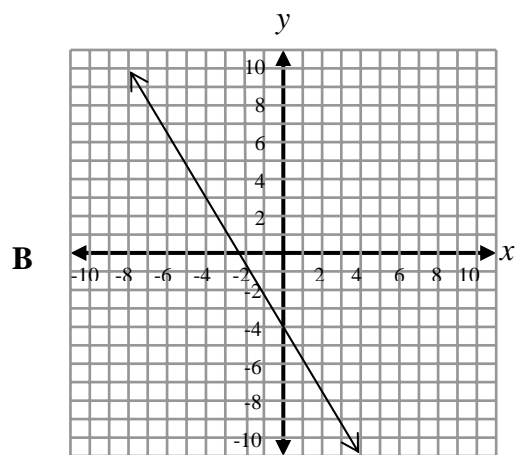
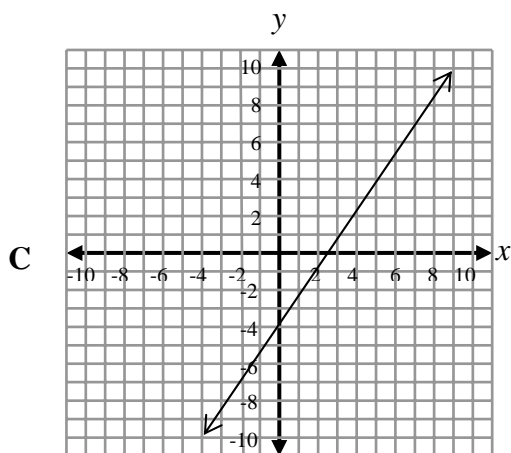
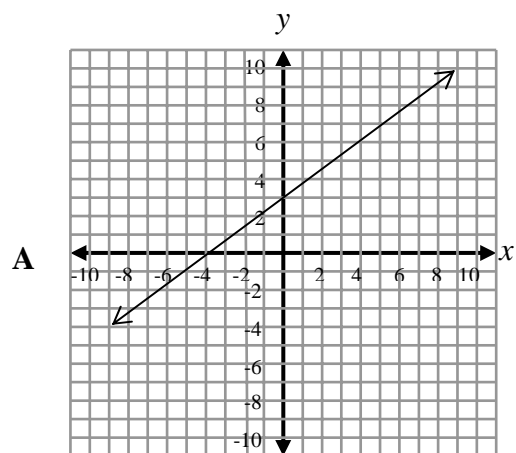


D.



16. Which graph below best represents the values in the table below?

$x$	$y$
-3	1
0	-4
3	-9



## **Standard 5: Structure and Logic**

### **General concepts you should know:**

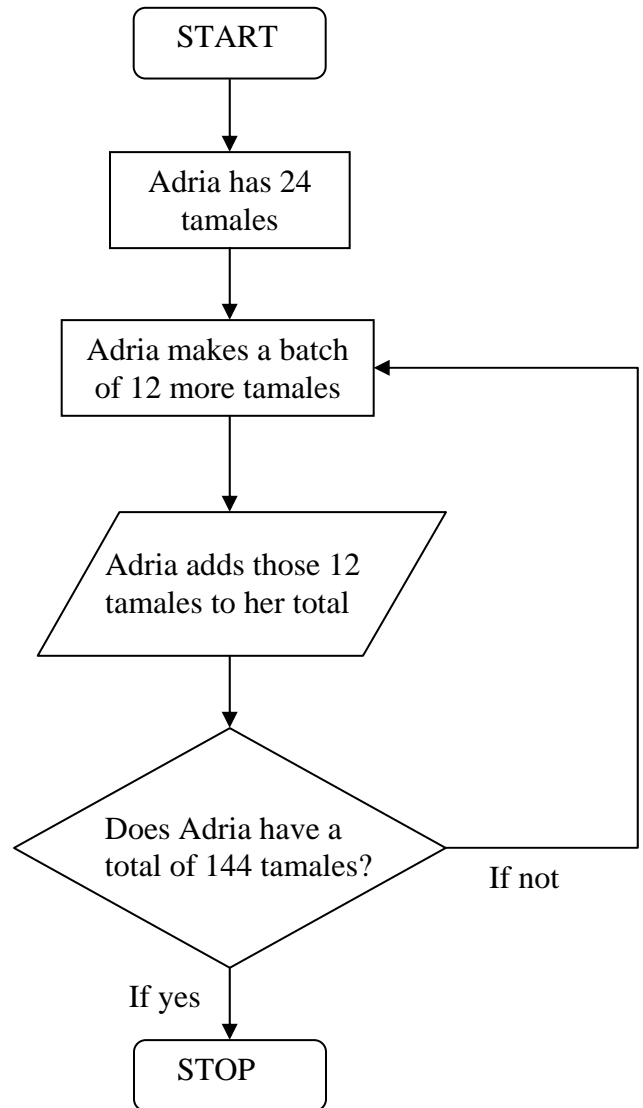
- Inductive and deductive reasoning
- Validity of arguments

17. If you own a brindeel, then you own a snafule.

Using the statement above, which of the following conclusions is valid?

- A. No brindeels are snafules.
- B. No snafules are brandeels.
- C. All brindeels are snafules.
- D. All snafules are brandeels.

18. Adria is making tamales to sell at a school fundraiser. She has already made 24 tamales. The flow chart below shows her plan for making 144 tamales for the fundraiser.



How many batches will Adria have to make to have 144 tamales?

- A. 12
- B. 11
- C. 10
- D. 9

# Appendix A: Scoring Keys

## Reading Key

Question #1: C  
Question #2: D  
Question #3: A  
Question #4: C  
Question #5: B  
Question #6: A  
Question #7: B  
Question #8: D

## Mathematics Key:

Question #1: D  
Question #2: C  
Question #3: B  
Question #4: D  
Question #5: A  
Question #6: B  
Question #7: A  
Question #8: B  
Question #9: C  
Question #10: B  
Question #11: D  
Question #12: A  
Question #13: C  
Question #14: A  
Question #15: D  
Question #16: B  
Question #17: C  
Question #18: C

## Appendix B IDEAS and CONTENT

<p><b>6</b></p> <p>The writing is exceptionally clear, focused and interesting. It holds the reader's attention throughout. Main ideas stand out and are developed by strong support and rich details suitable to audience and purpose. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• clarity, focus, and control.</li> <li>• main idea(s) that stand out.</li> <li>• supporting, relevant, carefully selected details; when appropriate, use of resources provides strong, accurate, credible support</li> <li>• a thorough, balanced, in-depth explanation/ exploration of the topic; the writing makes connections and shares insights.</li> <li>• content and selected details that are well suited to audience and purpose.</li> </ul>	<p><b>5</b></p> <p>The writing is clear, focused and interesting. It holds the reader's attention. Main ideas stand out and are developed by supporting details suitable to audience and purpose. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• clarity, focus, and control.</li> <li>• main idea(s) that stand out.</li> <li>• supporting, relevant, carefully selected details; when appropriate, use of resources provides strong, accurate, credible support.</li> <li>• a thorough, balanced explanation/exploration of the topic; the writing makes connections and shares insights.</li> <li>• content and selected details that are well-suited to audience and purpose.</li> </ul>	<p><b>4</b></p> <p>The writing is clear and focused. The reader can easily understand the main ideas. Support is present, although it may be limited or rather general. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• an easily identifiable purpose.</li> <li>• clear main idea(s)</li> <li>• supporting details that are relevant, but may be overly general or limited in places; when appropriate, resources are used to provide accurate support.</li> <li>• a topic that is explored/explained, although developmental details may occasionally be out of balance with the main idea(s); some connections and insights may be present.</li> <li>• content and selected details that are relevant, but perhaps not consistently well chosen for audience and purpose.</li> </ul>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">APPENDIX B – Official Scoring Guide for AIMS Writing</p>
<p><b>3</b></p> <p>The reader can understand the main ideas, although they may be overly broad or simplistic, and the results may not be effective. Supporting detail is often limited, insubstantial, overly general, or occasionally slightly off-topic. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• an easily identifiable purpose and main idea(s).</li> <li>• predictable or overly-obvious main ideas or plot; conclusions or main points seem to echo observations heard elsewhere.</li> <li>• support that is attempted; but developmental details that are often limited in scope, uneven, somewhat off-topic, predictable, or overly general.</li> <li>• details that may not be well-grounded in credible resources; they may be based on clichés, stereotypes or questionable sources of information.</li> <li>• difficulties when moving from general observations to specifics.</li> </ul>	<p><b>2</b></p> <p>Main ideas and purpose are somewhat unclear or development is attempted but minimal. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• a purpose and main idea(s) that may require extensive inferences by the reader.</li> <li>• minimal development; insufficient details.</li> <li>• irrelevant details that clutter the text.</li> <li>• Extensive repetition of detail.</li> </ul>	<p><b>1</b></p> <p>The writing lacks a central idea or purpose. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• ideas that are extremely limited or simply unclear.</li> <li>• attempts at development that are minimal or non-existent; the paper is too short to demonstrate the development of an idea.</li> </ul>	

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## ORGANIZATION

<p><b>6</b></p> <p>The organization enhances the central idea(s) and its development. The order and structure are compelling and move the reader through the text easily. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• effective, perhaps creative, sequencing; the organizational structure fits the topic, and the writing is easy to follow.</li> <li>• a strong, inviting beginning that draws the reader in and a strong satisfying sense of resolution or closure.</li> <li>• smooth, effective transitions among all elements (sentences, paragraphs, and ideas).</li> <li>• details that fit where placed.</li> </ul>	<p><b>5</b></p> <p>The organization enhances the central idea(s) and its development. The order and structure are strong and move the reader through the text. The writing is characterized by.</p> <ul style="list-style-type: none"> <li>• effective sequencing; the organizational structure fits the topic, and the writing is easy to follow.</li> <li>• an inviting beginning that draws the reader in and a satisfying sense of resolution or closure.</li> <li>• smooth, effective transitions among all elements (sentences, paragraphs, and ideas).</li> <li>• details that fit where placed.</li> </ul>	<p><b>4</b></p> <p>Organization is clear and coherent. Order and structure are present, but may seem formulaic. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• clear sequencing.</li> <li>• an organization that may be predictable.</li> <li>• a recognizable, developed beginning that may not be particularly inviting; a developed conclusion that may lack subtlety.</li> <li>• a body that is easy to follow with details that fit where placed.</li> <li>• transitions that may be stilted or formulaic.</li> <li>• organization which helps the reader, despite some weaknesses.</li> </ul>
<p><b>3</b></p> <p>An attempt has been made to organize the writing; however, the overall structure is inconsistent or skeletal. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• attempts at sequencing, but the order or the relationship among ideas may occasionally be unclear.</li> <li>• a beginning and an ending which, although present, are either undeveloped or too obvious (e.g. “My topic is...”, “These are all the reasons that...”)</li> <li>• transitions that sometimes work. The same few transitional devices (e.g., coordinating conjunctions, numbering, etc.) may be overused.</li> <li>• a structure that is skeletal or too rigid.</li> <li>• placement of details that may not always be effective.</li> <li>• organization which lapses in some places, but helps the reader in others.</li> </ul>	<p><b>2</b></p> <p>The writing lacks a clear organizational structure. An occasional organizational device is discernible; however, the writing is either difficult to follow and the reader has to reread substantial portions, or the piece is simply too short to demonstrate organizational skills. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• some attempts at sequencing, but the order or the relationship among ideas is frequently unclear.</li> <li>• a missing or extremely undeveloped beginning, body, and/or ending.</li> <li>• a lack of transitions, or when present, ineffective or overused.</li> <li>• a lack of an effective organizational structure.</li> <li>• details that seem to be randomly placed, leaving the reader frequently confused.</li> </ul>	<p><b>1</b></p> <p>The writing lacks coherence; organization seems haphazard and disjointed. Even after rereading, the reader remains confused. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• a lack of effective sequencing.</li> <li>• a failure to provide an identifiable beginning, body and/or ending.</li> <li>• a lack of transitions.</li> <li>• pacing that is consistently awkward; the reader feels either mired down in trivia or rushed along too rapidly.</li> <li>• a lack of organization which ultimately obscures or distorts the main point.</li> </ul>

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## VOICE

<p><b>6</b></p> <p>The writer has chosen a voice appropriate for the topic, purpose and audience. The writer seems deeply committed to the topic, and there is an exceptional sense of “writing to be read.” The writing is expressive, engaging, or sincere. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• an effective level of closeness to or distance from the audience (e.g., a narrative should have a strong personal voice, while an expository piece may require extensive use of outside resources and a more academic voice; nevertheless, both should be engaging, lively, or interesting. Technical writing may require greater distance.).</li> <li>• an exceptionally strong sense of audience; the writer seems to be aware of the reader and of how to communicate the message most effectively. The reader may discern the writer behind the words and feel a sense of interaction.</li> <li>• a sense that the topic has come to life; when appropriate, the writing may show originality, liveliness, honesty, conviction, excitement, humor, or suspense.</li> </ul>	<p><b>5</b></p> <p>The writer has chosen a voice appropriate for the topic, purpose, and audience. The writer seems committed to the topic, and there is a sense of “writing to be read.” The writing is expressive, engaging or sincere. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• an appropriate level of closeness to or distance from the audience (e.g., a narrative should have a strong personal voice while an expository piece may require extensive use of outside resources and a more academic voice; nevertheless, both should be engaging, lively or interesting. Technical writing may require greater distance.).</li> <li>• a strong sense of audience; the writer seems to be aware of the reader and of how to communicate the message most effectively. The reader may discern the writer behind the words and feel a sense of interaction.</li> <li>• a sense that the topic has come to life; when appropriate, the writing may show originality, liveliness, honesty, conviction, excitement, humor, or suspense.</li> </ul>	<p><b>4</b></p> <p>A voice is present. The writer demonstrates commitment to the topic, and there may be a sense of “writing to be read.” In places, the writing is expressive, engaging, or sincere. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• a questionable or inconsistent level of closeness to or distance from the audience.</li> <li>• a sense of audience; the writer seems to be aware of the reader but has not consistently employed an appropriate voice. The reader may glimpse the writer behind the words and feel a sense of interaction in places.</li> <li>• liveliness, sincerity, or humor when appropriate; however, at times the writing may be either inappropriately casual or personal, or inappropriately formal and stiff.</li> </ul>
<p><b>3</b></p> <p>The writer’s commitment to the topic seems inconsistent. A sense of the writer may emerge at times; however, the voice is either inappropriately personal or inappropriately impersonal. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• a limited sense of audience; the writer’s awareness of the reader is unclear.</li> <li>• an occasional sense of the writer behind the words; however, the voice may shift or disappear a line or two later and the writing become somewhat mechanical.</li> <li>• a limited ability to shift to a more objective voice when necessary.</li> </ul>	<p><b>2</b></p> <p>The writing provides little sense of involvement or commitment. There is no evidence that the writer has chosen a suitable voice. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• little engagement of the writer; the writing tends to be largely flat, lifeless, stiff, or mechanical.</li> <li>• a voice that is likely to be overly informal and personal.</li> <li>• a lack of audience awareness; there is little sense of “writing to be read.”</li> <li>• little or no hint of the writer behind the words. There is rarely a sense of interaction between reader and writer.</li> </ul>	<p><b>1</b></p> <p>The writing seems to lack a sense of involvement or commitment. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• no engagement of the writer; the writing is flat and lifeless.</li> <li>• a lack of audience awareness; there is no sense of “writing to be read.”</li> <li>• no hint of the writer behind the words. There is no sense of interaction between writer and reader; the writing does not involve or engage the reader.</li> </ul>

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## WORD CHOICE

<p><b>6</b> Words convey the intended message in an exceptionally interesting, precise, and natural way appropriate to audience and purpose. The writer employs a rich, broad range of words, which have been carefully chosen and thoughtfully placed for impact. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• accurate, strong, specific words; powerful words energize the writing.</li> <li>• fresh, original expression; slang, if used, seems purposeful and is effective.</li> <li>• vocabulary that is striking and varied, but that is natural and not overdone.</li> <li>• ordinary words used in an unusual way.</li> <li>• words that evoke strong images; figurative language may be used.</li> </ul>	<p><b>5</b> Words convey the intended message in an interesting, precise, and natural way appropriate to audience and purpose. The writer employs a broad range of words which have been carefully chosen and thoughtfully placed for impact. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• accurate, specific words; word choices energize the writing.</li> <li>• fresh, vivid expression; slang, if used, seems purposeful and is effective.</li> <li>• vocabulary that may be striking and varied, but that is natural and not overdone.</li> <li>• ordinary words used in an unusual way.</li> <li>• words that evoke clear images; figurative language may be used.</li> </ul>	<p><b>4</b> Words effectively convey the intended message. The writer employs a variety of words that are functional and appropriate to audience and purpose. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• words that work but do not particularly energize the writing.</li> <li>• expression that is functional; however, slang, if used, does not seem purposeful and is not particularly effective.</li> <li>• attempts at colorful language that may occasionally seem overdone.</li> <li>• occasional overuse of technical language or jargon.</li> <li>• rare experiments with language; however, the writing may have some fine moments and generally avoids clichés.</li> </ul>
<p><b>3</b> Language is quite ordinary, lacking interest, precision and variety, or may be inappropriate to audience and purpose in places. The writer does not employ a variety of words, producing a sort of “generic” paper filled with familiar words and phrases. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• words that work, but that rarely capture the reader’s interest.</li> <li>• expression that seems mundane and general; slang, if used, does not seem purposeful and is not effective.</li> <li>• attempts at colorful language that seem overdone or forced.</li> <li>• words that are accurate for the most part, although misused words may occasionally appear, technical language or jargon may be overused or inappropriately used.</li> <li>• reliance on clichés and overused expressions.</li> </ul>	<p><b>2</b> Language is monotonous and/or misused, detracting from the meaning and impact. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• words that are colorless, flat or imprecise.</li> <li>• monotonous repetition or overwhelming reliance on worn expressions that repeatedly distract from the message.</li> <li>• images that are fuzzy or absent altogether.</li> </ul>	<p><b>1</b> The writing shows an extremely limited vocabulary or is so filled with misuses of words that the meaning is obscured. Only the most general kind of message is communicated because of vague or imprecise language. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• general, vague words that fail to communicate.</li> <li>• an extremely limited range of words.</li> <li>• words that simply do not fit the text; they seem imprecise, inadequate, or just plain wrong.</li> </ul>

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## SENTENCE FLUENCY

<p><b>6</b></p> <p>The writing has an effective flow and rhythm. Sentences show a high degree of craftsmanship, with consistently strong and varied structure that makes expressive oral reading easy and enjoyable. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• a natural, fluent sound; it glides along with one sentence flowing effortlessly into the next.</li> <li>• extensive variation in sentence structure, length, and beginnings that add interest to the text.</li> <li>• sentence structure that enhances meaning by drawing attention to key ideas or reinforcing relationships among ideas.</li> <li>• varied sentence patterns that create an effective combination of power and grace.</li> <li>• strong control over sentence structure; fragments, if used at all, work well.</li> <li>• stylistic control; dialogue, if used, sounds natural.</li> </ul>	<p><b>5</b></p> <p>The writing has an easy flow and rhythm. Sentences are carefully crafted, with strong and varied structure that makes expressive oral reading easy and enjoyable. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• a natural, fluent sound; it glides along with one sentence flowing into the next.</li> <li>• variation in sentence structure, length, and beginnings that add interest to the text.</li> <li>• sentence structure that enhances meaning.</li> <li>• control over sentence structure; fragments, if used at all, work well.</li> <li>• stylistic control; dialogue, if used sounds natural.</li> </ul>	<p><b>4</b></p> <p>The writing flows; however, connections between phrases or sentences may be less than fluid. Sentence patterns are somewhat varied, contributing to ease in oral reading. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• a natural sound; the reader can move easily through the piece, although it may lack a certain rhythm and grace.</li> <li>• some repeated patterns of sentence structure, length, and beginnings that may detract somewhat from overall impact.</li> <li>• strong control over simple sentence structures, but variable control over more complex sentences; fragments, if present, are usually effective.</li> <li>• occasional lapses in stylistic control; dialogue, if used, sounds natural for the most part, but may at times sound stilted or unnatural.</li> </ul>
<p><b>3</b></p> <p>The writing tends to be mechanical rather than fluid. Occasional awkward constructions may force the reader to slow down or reread. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• some passages that invite fluid oral reading; however, others do not.</li> <li>• some variety in sentences structure, length, and beginnings, although the writer falls into repetitive sentence patterns.</li> <li>• good control over simple sentence structures, but little control over more complex sentences; fragments, if present, may not be effective.</li> <li>• sentences which, although functional, lack energy.</li> <li>• lapses in stylistic control; dialogue, if used, may sound stilted or unnatural.</li> </ul>	<p><b>2</b></p> <p>The writing tends to be either choppy or rambling. Awkward constructions often force the reader to slow down or reread. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• significant portions of the text that are difficult to follow or read aloud.</li> <li>• sentence patterns that are monotonous (e.g., subject-verb or subject-verb-object).</li> <li>• a significant number of awkward, choppy, or rambling constructions.</li> </ul>	<p><b>1</b></p> <p>The writing is difficult to follow or to read aloud. Sentences tend to be incomplete, rambling, or very awkward. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• text that does not invite—and may not even permit—smooth oral reading.</li> <li>• confusing word order that is often jarring and irregular.</li> <li>• sentence structure that frequently obscures meaning.</li> <li>• sentences that are disjointed, confusing, or rambling.</li> </ul>

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## CONVENTIONS

<p><b>6</b></p> <p>The writing demonstrates exceptionally strong control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage) and uses them effectively to enhance communication. Errors are so few and so minor that the reader can easily skim right over them unless specifically searching for them. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• strong control of conventions; manipulation of conventions may occur for stylistic effect.</li> <li>• strong, effective use of punctuation that guides the reader through the text.</li> <li>• correct spelling, even of more difficult words.</li> <li>• paragraph breaks that reinforce the organizational structure.</li> <li>• correct grammar and usage that contribute to clarity and style.</li> <li>• skill in using a wide range of conventions in a sufficiently long and complex piece.</li> <li>• little or no need for editing.</li> </ul>	<p><b>5</b></p> <p>The writing demonstrates strong control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage) and uses them effectively to enhance communication. Errors are so few and so minor that they do not impede readability. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• strong control of conventions.</li> <li>• effective use of punctuation that guides the reader through the text.</li> <li>• correct spelling, even of more difficult words.</li> <li>• paragraph breaks that reinforce the organizational structure.</li> <li>• correct capitalization; errors, if any, are minor.</li> <li>• correct grammar and usage that contribute to clarity and style.</li> <li>• skill in using a wide range of conventions in a sufficiently long and complex piece.</li> <li>• little need for editing.</li> </ul>	<p><b>4</b></p> <p>The writing demonstrates control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage). Minor errors, while perhaps noticeable, do not impede readability. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• control over conventions used, although a wide range is not demonstrated.</li> <li>• correct end-of-sentence punctuation, internal punctuation may sometimes be incorrect.</li> <li>• spelling that is usually correct, especially on common words.</li> <li>• basically sound paragraph breaks that reinforce the organizational structure.</li> <li>• correct capitalization; errors, if any, are minor.</li> <li>• occasional lapses in correct grammar and usage; problems are not severe enough to distort meaning or confuse the reader.</li> <li>• moderate need for editing.</li> </ul>
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<p><b>3</b></p> <p>The writing demonstrates limited control of standard writing conventions (e.g., punctuation, spelling, capitalization, paragraph breaks, grammar and usage). Errors begin to impede readability. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• some control over basic conventions; the text may be too simple to reveal mastery.</li> <li>• end-of-sentence punctuation that is usually correct; however, internal punctuation contains frequent errors.</li> <li>• spelling errors that distract the reader; misspelling of common words occurs.</li> <li>• paragraphs that sometimes run together or begin at ineffective places.</li> <li>• capitalization errors.</li> <li>• errors in grammar and usage that do not block meaning but do distract the reader.</li> <li>• significant need for editing.</li> </ul>	<p><b>2</b></p> <p>The writing demonstrates little control of standard writing conventions. Frequent, significant errors impede readability. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• little control over basic conventions.</li> <li>• many end-of-sentence punctuation errors; internal punctuation contains frequent errors.</li> <li>• spelling errors that frequently distract the reader; misspelling of common words often occurs.</li> <li>• paragraphs that often run together or begin in ineffective places.</li> <li>• capitalization that is inconsistent or often incorrect.</li> <li>• errors in grammar and usage that interfere with readability and meaning.</li> <li>• substantial need for editing.</li> </ul>	<p><b>1</b></p> <p>Numerous errors in usage, spelling, capitalization, and punctuation repeatedly distract the reader and make the text difficult to read. In fact, the severity and frequency of errors are so overwhelming that the reader finds it difficult to focus on the message and must reread for meaning. The writing is characterized by</p> <ul style="list-style-type: none"> <li>• very limited skill in using conventions.</li> <li>• basic punctuation (including end-of-sentence punctuation) that tends to be omitted, haphazard, or incorrect.</li> <li>• frequent spelling errors that significantly impair readability.</li> <li>• paragraph breaks that may be highly irregular or so frequent (every sentence) that they bear no relation to the organization of the text.</li> <li>• capitalization that appears to be random.</li> <li>• a need for extensive editing.</li> </ul>
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# APPENDIX C

## AIMS Reference Sheet

### PLANE FIGURES: PERIMETERS AND AREAS

Name	Notation	Perimeter ( $P$ ) Circumference ( $C$ )	Area ( $A$ )
Triangle	$a, b, c$ = sides $h$ = height	$P = a + b + c$	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
Rectangle	$b$ = base $h$ = height	$P = 2(h + b)$	$A = bh$
Circle	$r$ = radius $d$ = diameter	$C = \pi d$ or $C = 2\pi r$	$A = \pi r^2$
Parallelogram	$a, b$ = sides $h$ = height	$P = 2(a + b)$	$A = bh$
Trapezoid	$a, b, c, d$ = sides $B_1$ = long base $B_2$ = short base $h$ = height	$P = a + b + c + d$	$A = \frac{(B_1 + B_2)h}{2}$
			Use 3.14 or $\frac{22}{7}$ for $\pi$

### GEOMETRIC SOLIDS: VOLUMES

Name	Notation	Volume ( $V$ )
Rectangular Prism	$l$ = length $w$ = width $h$ = height	$V = lwh$
Rectangular Pyramid	$B$ = area of the base $h$ = height	$V = \frac{1}{3}Bh$ or $V = \frac{Bh}{3}$
Right Cylinder	$r$ = radius $h$ = height	$V = \pi r^2 h$
Right Cone	$r$ = radius $h$ = height	$V = \frac{1}{3}\pi r^2 h$ or $V = \frac{\pi r^2 h}{3}$
Sphere	$r$ = radius	$V = \frac{4}{3}\pi r^3$

### GEOMETRIC SOLIDS: SURFACE AREAS

Name	Notation	Surface Area ( $SA$ )
Rectangular Prism	$l$ = length $w$ = width $h$ = height	$SA = 2lw + 2lh + 2wh$
Right Cylinder	$r$ = radius $h$ = height	$SA = 2(\pi r^2) + 2\pi rh$

# APPENDIX D – TEST-TAKING STRATEGIES

## REVIEW

- **Be physically prepared.** Get plenty of rest the night before. On the day of the test, eat a healthy breakfast.
- **Be mentally prepared.** Try to relax and do your best. View the test as an opportunity to truly show what you know and are able to do.
- **Listen to directions** as the teacher explains them. **Ask** about any directions you do not understand.
- **Read the directions carefully.**
- **Look for key words** that will help you identify what the question is asking you to do.
- **Take your time** and work at your own pace. **AIMS is not a timed test**, but you do want to use your time well.
- **Move on** to the next item if you are stuck. **Be sure to return** to it later.
- **Make educated guesses** if you are unsure of an answer. First eliminate choices that are obviously incorrect, then logically select from the remaining choices.
- **Take the time to review your answers** when you are finished. **Re-read** your written responses to check that they are clear.

# NOTES